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THE NATIONAL SHIPBUILDING RESEARCH PROGRAM

Proceedings of the REAPS Technical Symposium

Paper No. 26: Current Status of the Low Cost Parts Definition Project

U.S. DEPARTMENT OF THE NAVY CARDEROCK DIVISION, NAVAL SURFACE WARFARE CENTER

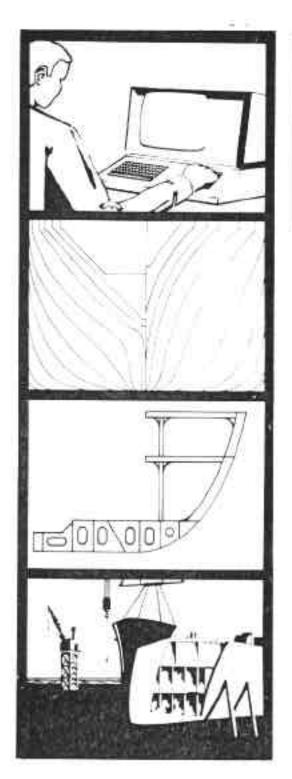
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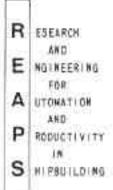
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Proceedings of the REAPS Technical Symposium September 11-13, 1979 San Diego, California

CURRENT STATUS OF THE LOW COST PARTS DEFINITION PROJECT

Richard C. Moore

Manager of Steel Fabrication Engineering Development
Newport News Shipbuilding and Dry Dock Dompany
Newport News, Virginia

- Mr. Moore is currently the Newport News REAPS technical representative, the Project Manager of the low cost parts definition project, and is a member of a structural CAD/CAM project. He received his degrees in naval architecture and marine engineering from the University of Michigan. Together with Doug Martin, he authored the paper, "Requirements and Benefits of Integrated Computer Aided Ship Design and Production" presented at ICCAS '79.
- Mr. Moore's past experience includes management responsibility at different times for Mold Loft, Fabrication Shop and Assembly Shops. He has also been instrumental in the implementation of AUTOKON; with additional experience in facility planning for the automation of steel fabrication, and manufacturing engineering.

INTERACTIVE GRAPHICS PART DEFINITION PROJECT

MAIN REQUIREMENTS OF IPD AS DEFINED BY NNS AND REAPS TECH REPS,

- HARDWARE/SOFTWARE PACKAGE TO ALLOW USERS-TO PERFORM REAL TIME DEFINITION OF THEIR APPLICATION WITH VISUAL (GRAPHIC) OUTPUT AND BUILD UP A DIGITAL MODEL OF THE DEFINITION AT THE SAME TIME,
- MUST BE PORTABLE AND, CAPABLE OF BEING. UPDATED AND EXPANDED INDEPENDENTLY OF THE VENDOR,
- PROVIDE A GENERAL TOOL TO BE AVAILABLE FOR FUTURE GRAPHICS PROJECTS WITHIN U.S. S H I P B U I L D I N G ,
- DEDICATED COMPUTER HARDWARE TO PROVIDE. RESPONSE TO SUPPORT INTERACTIVE GRAPHICS.
- CAPABLE OF DIRECT INTERFACE TO AUTOKON/ SPADES/STEERBEAR SYSTEMS.

FUNCTIONAL AREAS ADDRESSED BY IPD

- STRUCTURAL PART DEFINITION (CURRENT LOFTING)
- NESTING
- STRUCTURAL SHOP DRAWINGS
- Nc MACHINING (APT)
- DESIGN USE

SECONDARY EVENTS AT NNS

CONTRACT STATUS

- PHASE I FEASIBILITY AND DESIGN STUDY
 - SYSTEM SPECIFICATION
 - HARDWARE CONFIGURATION
 - POTENTIAL VENDORS
 - BENCHMARK (WITH 8 VENDORS)
 - INTERIM REPORTS TO REAPS ADVISORY GROUP AND TECH REPS,
 - FINAL VENDOR SELECTION BY NNS WITH TECH REP APPROVAL,

COMPLETED OCT '78

• PHASE II - UPDATE MARAD PROPOSAL AND RECEIVE APPROVAL

NNS HAS PROCEEDED WITH CONTRACTS TO VENDORS FOR SOME HARDWARE AND ALL SOFTWARE AT ITS OWN EXPENSE, WE HAVE STARTED WITH PHASE II DEVELOPMENT WITH AGREEMENT TO CHARGE TO THE EXISTING PHASE II CONTRACT.

EXPECTED OCT '79

HARDWARE CONFIGURATION

- COMPUTER INTERDATA 3220
- GRAPHICS DISPLAY TEKTRONIX 4081
- HARDCOPY VERSATEC 8224

PROJECT PLAN PHASE. II.

	MONTH OF COMPLETION FROM START OF PHASE
* • ISSUE PURCHASE ORDERS.	1
 INTERDATA TRAINING 	3
* • DEFINE DATA SPECIFICATION	5
* • AD 2000 INTERFACE	5
 WRITE HOST ROUTINES 	7
 HARDWARE/SOFTWARE INSTALLATION 	7
• RJE INTERFACE	7
(10/79)* • AD 2000 INSTALLATION	9
(10/79)* • AD 2000 TRAINING	10
 MI NI SEND/RECEI VE 	12
• REFINE NEST	14
• REFINE NORMS	25
• TABLES	19
 SHOP DRAWING CAPABILITY 	' 20
 REFINE PARTS DEFINITION 	20
• DOCUMENTATION	23
 WORKSHOP 	24

*INDICATES WORK ALREADY IN PROGRESS

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